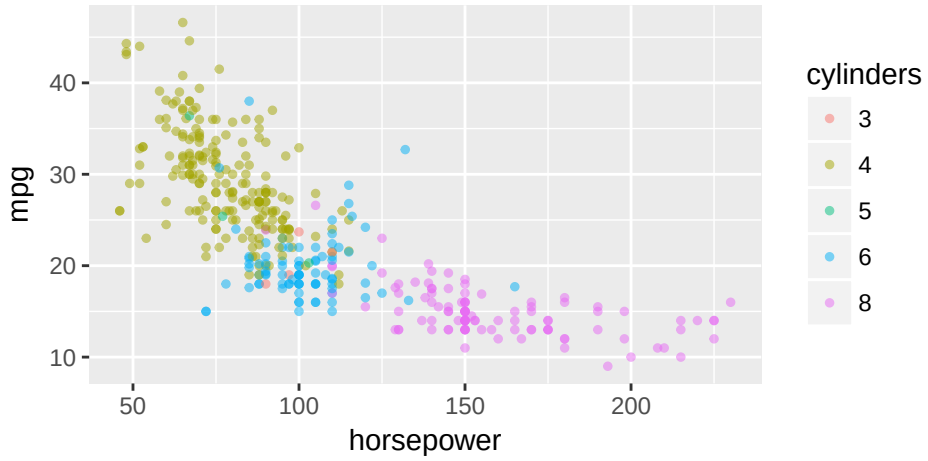
MATE-T580: Quiz 5

Name:

Question 1

`Auto` is another R dataset that has information on different car models:

```
##   mpg cylinders horsepower weight year                       name
## 1  18         8        130   3504   70 chevrolet chevelle malibu
## 2  15         8        165   3693   70         buick skylark 320
## 3  18         8        150   3436   70        plymouth satellite
## 4  16         8        150   3433   70             amc rebel sst
## 5  17         8        140   3449   70               ford torino
```



Which line of code represents the proper way to reproduce the plot above:

A.

```
ggplot(Auto, aes(x=horsepower, y=mpg, shape=cylinders) + geom_point(size=1, alpha=0.5)
```

B.

```
ggplot(Auto, aes(x=horsepower, y=mpg, col=cylinders)) + geom_point(size=1, alpha=0.5)
```

C.

```
ggplot(Auto, aes(x=horsepower, y=mpg)) + geom_point(size=1, alpha=0.5, col=cylinders)
```

D.

```
ggplot(Auto, aes(x=horsepower, y=mpg)) + geom_point(size=1, alpha=0.5, shape=cylinders)
```

Question 2

For the same `Auto` dataset, you wish to compare basic statistics of `mpg` as function of `cylinders`. Complete the line of code below to produce the desired result.:

```
ggplot(Auto, aes(x=cylinders, y=mpg)) + _________
```

A.

```
geom_density()
```

B.

```
geom_bar()
```

C

```
geom_histogram()
```

D

```
geom_boxplot()
```

Question 3

For the same `Auto` dataset, you wish to plot the distribution of car weight across all cars in the dataset. Which line of code represents the proper way to produce the desired result:

A.

```
ggplot(Auto, aes(x=weight)) + geom_histogram()
```

B.

```
ggplot(Auto, aes(x=weight)) + geom_barplot()
```

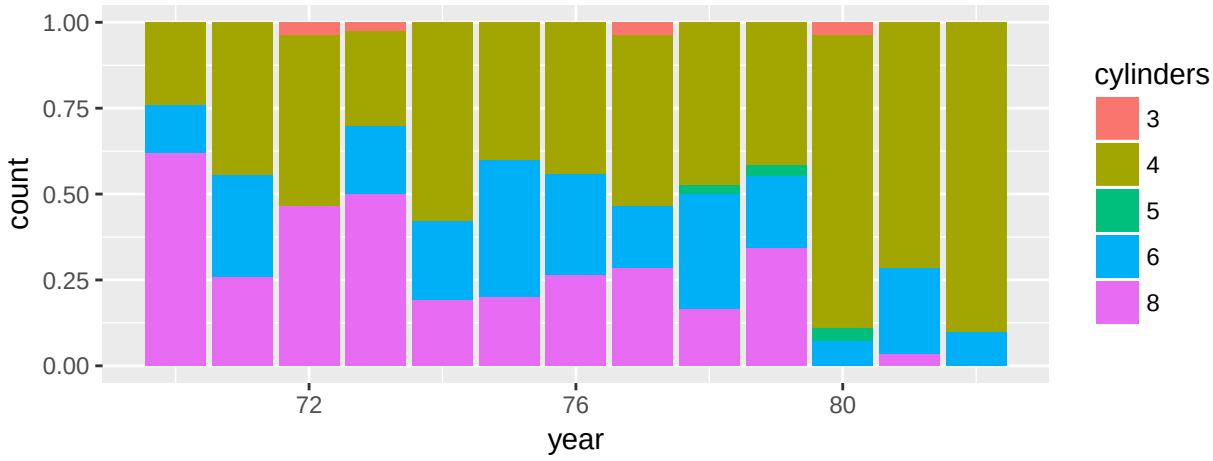
C

```
ggplot(Auto, aes(x=weight)) + geom_boxplot()
```

D

```
ggplot(Auto, aes(x=weight)) + geom_point()
```

Question 4



For the same `Auto` dataset, write the line of code to reproduce the plot above:

Question 5

For the same `Auto` dataset, you wish to explore the development of `mpg` over time (i.e. the `year` variable), while controling for the number of `cylinders`. To avoid crowding your plot, you will use faceting, such that each panel corresponds to a fixed number of cylinders. Write the line of code to produce the desired result: